WHAT IS CLAIMED IS:

1. A system comprising:

means for directing a gas stream into a reference channel and a measurement channel;

means for evenly restricting gas flow through the reference channel and the measurement channel;

probes located adjacent ends of the reference channel and the measurement channel and having an elongated nozzle orifice; and

means for sensing a mass of gas flow between the reference channel and the measurement channel.

2. The system of claim 1, further comprising:

a reference surface positioned a reference standoff from the reference probe, a gas stream from the reference probe impinges on the reference surface after traveling across the reference standoff; and

a measurement surface positioned a measurement standoff from the measurement probe, a gas stream from the measurement probe impinges on the measurement surface after traveling across the measurement standoff,

wherein the means for sensing senses a difference between the reference standoff and the measurement standoff.

3. The system of claim 1, further comprising:

means for controlling a mass flow rate of the gas stream positioned before the means for directing.

4. The system of claim 3, further comprising:

means for reducing gas turbulence positioned after the means for controlling.

5. The system of claim 1, wherein the nozzle orifice has a height H which is larger than a width W.

6. The system of claim 1, wherein:

the nozzle orifice has a height H and a width W; and

a ratio of H to W is about 2:1 to about 20:1.

7. The system of claim 1, wherein:

the nozzle orifice has a height H and a width W; and

a ratio of H to W is about 10:1.

8. A gas gauge proximity sensor that is provided with a gas supply during operation, comprising:

a dividing portion that divides the supplied gas into a reference channel and a measurement channel;

flow restrictors placed in the reference channel and measurement channel;

probes respectively coupled adjacent ends of the reference channel and the measurement channel, the probes including elongated nozzle orifices; and

a mass flow sensor coupled between the reference and measurement channels that senses the mass of gas flow therebetween.

9. The gas gauge proximity sensor of claim 8, further comprising:

a reference surface positioned a reference standoff from the reference probe, a gas stream from the reference probe impinges on the reference surface after traveling across the reference standoff; and

a measurement surface positioned a measurement standoff from the measurement probe, a gas stream from the measurement probe impinges on the measurement surface after traveling across the measurement standoff,

wherein the mass flow sensor senses a difference between the reference standoff and the measurement standoff.

10. The system of claim 8, further comprising:

a mass flow rate controller positioned before the dividing portion.

11. The system of claim 10, further comprising:

a snubber located after the mass flow controller to reduce gas turbulence.

12. The system of claim 8, wherein the nozzle orifice has a height H which is larger than a width W.

13. The system of claim 8, wherein:

the nozzle orifice has a height H and a width W; and

a ratio of H to W is about 2:1 to about 20:1.

14. The system of claim 8, wherein:

the nozzle orifice has a height H and a width W; and

a ratio of H to W is about 10:1.

15. A method for proximity sensing comprising:

directing a gas stream into a reference channel and a measurement channel;

restricting gas flow through the reference channel and the measurement channel;

positioning nozzles having elongated orifices in probes adjacent ends of the reference channel and the measurement channel and proximate to a reference surface and a measurement surface; and

sensing a mass of gas flow between the reference channel and the measurement channel, to thereby determine measuring measurement channel and reference channel standoffs.

16. The method of claim 15, wherein the restricting gas flow step comprises evenly restricting the gas flow.

17. The method of claim 15, further comprising forming the elongated orifice with a height about two to about twenty times a width.

18. The method of claim 15, further comprising forming the elongated orifice with a height about ten times a width.